Iran J Parasitol, Supplementary Issue, Vol. 10, No. 1, May 2015
Proceedings of 2nd International and 9th National Congress of Parasitology and Parasitic Diseases of Iran (NICOPA 9)
Guilan, Iran; 20-22 May 2015

MOLECULAR CHARACTERIZATION OF TRICHOSTRONGYLUS COLUBRIFORMIS AND T. VITRINUS ISOLATED FROM HUMAN IN GUILAN PROVINCE: THE FIRST REPORT IN IRAN

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Trichostrongyliasis, the infection caused by the different species of the Genus *Trichostrongylus*, has a worldwide distribution in ruminants. Up to the moment, more the 30 species have been recognized to infect mammals of which 10 species reported from humans. In Iran, 9 species of the genus *Trichostrongylus* have reported from livestock, mainly from central and southwestern parts of the country. Interestingly, all these species have also been obtained from humans. Close contact with herbivorous animals and use of fresh livestock manure as fertilizer are the main cause of human infections. The fecal materials of a symptomatic patient from Langroud district of Guilan province, who had been diagnosed to be infected with *Trichostrongylus* spp., were collected after treatment with combination of Mebendazole and Albendazole. The male worms were obtained from the fecal materials identified as *T. colubriformis* and *T. vitrinus* by morphological characteristics. For definitive identification of the parasites a Polymerase Chain Reaction (PCR), specific for rDNA ITS2 was performed using the primer set of NC1: 5-ACGTCTGGTTCAGGGTTGTT-3) and NC2: 5- TTAGTTTCTTTTCCTCCGCT-3) (Chilton, 2004). In present study, amplicon of about 328 base pair (bp) was successfully produced by PCR for ITS2 region and using the BLAST system, *Trichostrongylus* isolates were identified as *T. colubriformis* and *T. vitrinus*. Sequences of these two human isolates were deposited in GenBank database (accession numbers: KF826913and KF872228, respectively).This study is the first molecular evidence of human isolates of *T. colubriformis* and *T. vitrinus in* Iran. The ITS2 sequence of Iranian *T. vitrinus* was identical to ITS2 sequences of *T. vitrinus from* New Zealand (Accession No. KC998731) and United Kingdom (Accession No. AY439027) and that of *T. colubriformis* was identical to isolates of Iran (animal isolate), Laos, Australia and Malaysia found in GenBank.

Keywords: trichostrongyliasis, *Trichostrongylus colubriformis, T. vitrinus*, molecular identification, Guilan, Iran

PREVALENCE OF ENTEROBIUS VERMICULARIS IN 4-7 YEAR OLD PATIENTS REFFERED TO CENTRAL LABORATORY IN EAST AZERBAIJAN PROVINCE, 1392-1393

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*Enterobius vermicularis (*Oxyuris) is an intestinal nematode with a direct transmission route and a worldwide distribution. Enterobiasis is common in children and has many adverse effects on their health. The noted complications are anorexia, malnutrition, pruritus ani, restlessness and vulvovaginitis. Due to its contagious nature, people may remain infected for years. The specific diagnosis is made by using of scotch tape (Graham method). The purpose of this study was to determine the prevalence of oxyuris in patients (aged 4-7 year old) admitted to the Central Department of Parasitology Laboratory in East Azerbaijan using the tape method from April 2013 to December 2014. Of 1030 examined individuals (54.8% male and 45.2% female), 19 cases (1.84%) were positive. The results revealed that 2.1% of girls and 1.6% of boys were infected with Oxyuris. The most common clinical symptoms in patients was anal itching. Children due to special circumstances are more vulnerable than other groups. Since, personal hygiene and crowding are crucial factors in transmission and distribution of the disease, health education has the most important role in increasing the knowledge of the families and reducing the prevalence of the enterobiasis.

Keywords: *Enterobius vermicularis*, prevalence, Graham method, scotch tape